

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-11 (canceled).

Claim 12 (new): A brazing method for brazing a first member a second member to be joined via a braze joint formed by fusing and solidifying a brazing material, the method comprising the steps of:

preparing the first member and the brazing material, the first member including a base plate composed of a ferrous material and a diffusion suppressing layer laminated on the base plate for suppressing diffusion of Fe atoms into the braze joint from the base plate during the brazing, the diffusion suppressing layer being composed of a Ni-Cr alloy essentially comprising not less than about 15 mass% and not greater than about 40 mass% of Cr, the brazing material being composed of a Cu-Ni alloy essentially comprising not less than about 10 mass% and not greater than about 20 mass% of Ni;

assembling the first and second members into a temporary assembly with the brazing material disposed between the diffusion suppressing layer of the first member and the second member;

performing a brazing process by maintaining the temporary assembly at a temperature of not less than about 1,200°C to fuse the brazing material and diffuse Ni atoms and Cr atoms into the fused brazing material from the diffusion suppressing layer to form the braze joint, causing the resulting brazing material of the braze joint to have an increased melting point by the diffusion of the Ni atoms and the Cr atoms to self-solidify the braze joint; and

cooling the resulting assembly.

Claim 13 (new): The brazing method as set forth in claim 12, wherein the second member includes a base plate composed of a ferrous material, and a diffusion

suppressing layer laminated on the base plate for suppressing diffusion of Fe atoms into the braze joint from the base plate during the brazing, the diffusion suppressing layer of the second member being composed of a Ni-Cr alloy essentially comprising not less than about 15 mass% and not greater than about 40 mass% of Cr.

Claim 14 (new): The brazing method as set forth in claim 13, wherein the base plates of the first member and the second member are each composed of a stainless steel.

Claim 15 (new): The brazing method as set forth in claim 12, wherein the Ni-Cr alloy of the diffusion suppressing layer has a Cr content of not less than about 30 mass%.

Claim 16 (new): The brazing method as set forth in claim 12, wherein the brazing material has a thickness of not less than about 20 μ m and not greater than about 60 μ m.

Claim 17 (new): The brazing method as set forth in claim 16, wherein the brazing temperature is not less than about 1,200°C and not higher than about 1,250°C, and a duration for which the temporary assembly is maintained at the brazing temperature is not shorter than about 30 min and not longer than about 60 min.

Claim 18 (new): A brazed structure comprising:
a first member;
a second member;
a braze joint joining the first member and second member to each other, the braze joint being made of a fused brazing material of a Cu-Ni alloy essentially comprising not less than about 10 mass% and not greater than about 20 mass% of Ni;
wherein

the first member includes a base plate composed of a ferrous material and a diffusion suppressing layer laminated on the base plate, and the diffusion suppressing layer being arranged to suppress diffusion of Fe atoms from the base plate into the braze joint disposed on the diffusion suppressing layer during brazing and is composed of a Ni-Cr alloy essentially comprising not less than about 15 mass% and not greater than about 40 mass% of Cr;

the braze joint is composed of a Cu-Ni-Cr alloy comprising not less than about 30 mass% of Ni and not less than 10 mass% of Cr and being free from segregated solidification.

Claim 19 (new): The brazed structure as set forth in claim 18, wherein the second member includes a base plate composed of a ferrous material and a diffusion suppressing layer laminated on the base plate for suppressing diffusion of Fe atoms into the braze joint from the base plate during the brazing, and the diffusion suppressing layer of the second member is composed of a Ni-Cr alloy essentially comprising not less than about 15 mass% and not greater than about 40 mass% of Cr.

Claim 20 (new): The brazed structure as set forth in claim 19, wherein the base plates of the first member and the second member are each composed of a stainless steel.

Claim 21 (new): The brazed structure as set forth in claim 20, wherein the first and second members each have a planar center portion and edge portions defined by bending edges along a planar center portion thereof, and are disposed in opposed relation with the edge portions thereof brazed to each other via the braze joint.

Claim 22 (new): The brazed structure as set forth in claim 18, wherein the Cu-Ni-Cr alloy of the braze joint has a Ni content of not less than about 35 mass%.

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Claim 23 (new): A heat exchanger comprising the brazed structure as set forth in claim 18.